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DEMONSTRATION OF A PERSONNEL CLEANSING STATION

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The Personnel Cleansing Station was set up according to the enclosed latest OCD diagram; and was for the treatment of stretcher chemical warfare casualties. The ambulatory patients care for themselves by going to the upper floor of some building and taking a bath.

For the purpose of demonstration, it was assumed that the patient who was brought in by the two attendants was suffering from a fractured arm as well as being a chemical warfare casualty. The two attendants were wearing gas masks, heavy rubber gloves, protective clothing, and rubber overshoes to protect them from the vesicant attack which was supposed to have been spread over the area. These stretcher bearers had a small first aid box with them, because of the utmost importance of treating a vesicant contaminated patient as soon as possible. It must be remembered that immediate prophylaxis is effective only up to five minutes after liquid contamination. It was assumed that the stretcher bearers had administered as much immediate first aid as possible in the field, and had adjusted a gas mask on the patient. Listed below are suggested items for inclusion in a chemical warfare First Aid Kit, and a summary of the use of its contents:

1. Copper Sulfate, 10% solution
2. Sodium Bicarbonate, 2% solution
3. Soap, bar
4. Kerosene
5. Clean Cotton Waste or Rags
6. Cotton, absorbent, compressed
7. Gauze, plain, compressed
8. Dichloramine-T in triacetin
9. Hydrogen Peroxide, 8%
10. Ointment, protective (M-4)

Use of Contents

1. For Use for white phosphorus burns.
2. For Use in irrigating vesicant eye lesions before blepharospasm.

3., 4., 5., 6., and 7.
For Use in First Aid Treatment of Vesicants.

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8. For Use in First Aid Treatment of Mustard Gas Contamination of the Skin.
9. For Use in First Aid Treatment of Lewisite and other arsenical gas contamination of the skin.
10. For Use as Prophylaxis against Vesicant Attack.

The stretcher bearers entered the Decontamination Room of the Personnel Cleansing Station after going through a shuffle box for the decontamination of their own boots. This shuffle box contained one part of bleach mixed with two parts of sand.

The equipment of the Decontamination Room consisted of the following:

1. Shuffle box - (1)
2. GI cans - (2)
3. Kerosene - (2 pails)
4. Saw horses - (2)
5. Low Table - (1)
6. Newspaper
7. Sponges - (2)
8. Low bench - (1)
9. Scissors - (1)
10. Gas Mask Bins
11. Exhaust Fan
12. Stretcher
13. Gas First Aid Kit

The personnel for this room consisted of the following:

1. Hospital Corpsmen (Stretcher Bearers) - (2)
2. Attendants - (3)

The personnel were equipped with the following:

1. Gas Masks (Civilian) - (6) - (1 mask on patient)
2. Protective clothing - (5 suits)
   trousers
   woolen gloves
   jumper
3. Rubber gloves - (5 pairs)
4. Rubber overshoes - (5 pairs)

In this room the patient was undressed, his clothes being carefully disposed of in a large gas-proof container. It can not be too strongly emphasized that the personnel giving first aid in removing the casualty's clothing should be completely protected, or they too will become casualties.

The next step was to determine exactly whether or not a vesicant had been used. This was done by employing gas detector paper which was inserted near a spot of the chemical warfare agent. The color of the paper turned red or orange, thus proving that the reports of vesicant attack were true.

The contaminated stretcher on which the patient was brought in on was then removed, and the patient was placed on a clean stretcher. This completed the functions of the undressing or decontamination room. The patient was then transferred through an air lock, which was long enough to accommodate a stretcher, into the Cleansing Room.

The equipment for the Cleansing Room consisted of:

1. Shower
2. Saw Horses - (2)
3. Stretcher - (1)
4. Air Lock - Blankets - (2)
5. Garden Hose
6. Sponge - (1)
7. Soap
8. Shuffle Box.

The personnel for the room included:

2 Nurses' Aids
2 Shower and Bathing Attendants
2 Stretcher Bearers.

The personnel equipment consisted of:

Nurses' Uniforms - (2)
Rubber Aprons - (2)
White Gowns - (2)
Rubber Boots - (2 pairs).

The two stretcher bearers advanced and received the patient in the air lock. There was another shuffle box at the entrance of the air lock into which the attendants stepped. They were careful to lift only one blanket of the air lock at a time. They then carried the patient into the cleansing room and placed the stretcher on the saw horses. The patient's mask was then removed, and the cleansing operation proceeded.

The cleansing operation consisted of:

1. Dry pads of cotton waste, or rags, were gently applied to absorb and remove any excess agent on the skin. These areas were patted; not rubbed or smeared.

2. The contaminated areas of the skin were gently patted with pads of cotton waste, clean rags or sponges which had been dampened with a solvent such as: kerosene, alcohol, or gasoline (not ethyl gasoline). Vesicants are oily substances and are soluble in the solutions mentioned. Extreme care was taken in disposing of the soiled pads, as vesicants are not destroyed in the solvents and are still capable of blistering.

3. For the purpose of demonstration, it was assumed that a mixture of mustard and lewisite gases had been used. A weak solution of hydrogen peroxide was applied to the contaminated areas to treat the Lewisite burns.

4. Dichloramine-T in triacetin was also applied to the skin for treatment of mustard contamination. However, the triacetin solution should not be used after erythema, or blistering, has occurred. Dichloramine-T may in itself be irritating to the skin, so its application was quickly followed by the soap and water procedure.

5. The vigorous use of soap and water was the next procedure. The patient was bathed by the two attendants, and then carefully dried.

6. All contaminated hair was then cut off, as mustard clings persistently to hair and may cause further burns.

The eyes of the patient required some special treatment, and the two nurses administered this first aid. However, it must be remembered that no first aid treatment should be used in the eyes after symptoms, such as blepharospasm and photophobia begin. It is also very important to remember that NO hydrogen peroxide, potassium permangamate, oil or dichloramine-T should be used in the eye! The nurses irrigated the patient's eyes with a 2% solution of sodium bicarbonate.

This completed the cleansing operation and the patient was no longer a problem of gas warfare. He was then transferred to the third room - the Dressing Room - where his fractured arm was cared for. The operation of this room was not demonstrated, however, because the special chemical warfare technique was no longer necessary in caring for the casualty.

[illegible]

[illegible]

[illegible]

DISCUSSION.

DR. ABT: Now, Dr. Bennett, would you like to discuss the demonstration?

DR. BENNETT: I think it worked very well as a demonstration. I can't pick any flaws in it. There is one thought that occurred to me, and that is that in this second room it would be possible to divide that with curtains and have a few wires stretched across, so that in handling male and female patients at the same time, it would be possible to give attention to men and women, and still not build a double cleansing station so that you would handle the men separately from the women as you have them in the cleansing station for ambulatory people.

The only other thing in the acting out of this play that some of you might have wondered about in the light of what I told you downstairs was that there were the stretcher bearers leaving by this other entrance here without getting cleaned up. That is because it is impossible to get them to the other station here on the stage easily unless they came through here.

I think you would agree with this, wouldn't you, Dr. Abt, that once they have taken up their stations out here, they would never go back through the station until they have taken off their clothing and then had decontaminated, or cleansed themselves?

DR. ABT: Yes, we ran them around downstairs. We only have two corpsmen. If we were to follow the act out properly, we would need two more. I wish, though, we had two more.

QUESTION: With regard to the technique there, when you left the mask on for the nurses to take off, are they not liable to become markedly contaminated? Wouldn't it be better to take the mask off first?

DR. ABT: Well, it is simply a matter of judgment, I think. It is individual judgment and common sense all the way through. If the leader in the undressing room had felt the mask was contaminated, he would have gotten it off, no doubt, before he even went through the air lock. On the other hand, if there had been a stream of patients going through, there might have been a chance that there would have been accumulated vapors in the cleansing room. Of course,

Major Cary will say these exhaust fans would have taken care of that, but, anyway, there is that chance, and perhaps it would be wise to leave the mask on as long as possible. That is about the only way I can figure it out.

I don't think you can make too definite rules. Certainly if the mask were contaminated on the way in, it should have been removed in this first room, but the compound fractures and the shock, the whole idea, it seems to me - - This is a civilian hospital and, as a medical man I was always taught the interest of the patient comes first, so you would worry about the patient's shock, and so forth.

On the other hand, the hospital is a communal project which is needed, and you couldn't just rush your patients in and contaminate your hospital. That wouldn't be so bad. You could clean up the building the way they did in the movie last night. On the other hand, your very valuable personnel - - and I am here forced to rap on the table - have to be protected, and you don't want to make casualties of them, so it is touch and go, I should say.

QUESTION: What if the patient were in shock, where would you start your plasma?

DR. ABT: You wouldn't start it, I don't think, until you got him in the second room.

QUESTION: How about the practical difficulties of a splint? If he were contaminated when he came in with the splint, you probably would have to take it off.

DR. ABT: Well, we made it about as difficult for ourselves as we could. I was going to put a splint on, and Dr. Coulter said no, no more properties, so I don't know. I would like to ask a surgeon. What about it, Dr. Allman? What would you do with a patient with his bone fractured? Would you help me out?

DR. ALLMAN: Well, it seems to me you would have to sacrifice the patient for the good of the other patients. I mean there is a priority there, isn't there?

DR. ABT: Well, one way or the other.

DR. ALLMAN: You might endanger the patient, but otherwise you would endanger too many more, that is all.

DR. ABT: The question of the splint comes up. What would you do about this splint? What about it, Dr. Bennett, if the man had a splint on?

DR. BENNETT: I should think that it would probably be preferable to put the splint on before he was brought in. I don't know just where in the cleansing process you are going to make a compromise. I think that, while it is not shown in this patient here, a medical officer outside might offer some advice in the handling of the casualties as they come in. He might pick out those who were in shock and badly injured, and might give them right of way, to that patient. Beyond that I don't know how it would be handled.

DR. ALLMAN: Another possibility would be for this man in shock just to be kept right in the corner of this undressing room and give the plasma while the other patients would be taken care of.

DR. ABT: Ensign North has an idea.

ENSIGN NORTH: In England it is customary in the receiving room as much as possible to have some trained medical personnel, at least corpsmen, and the corpsmen do such things as administer sedatives and drugs as necessary and anything of that description. They determine which ones they have to handle first and make any decisions of that type. They probably would pass on the proposition. As far as taking clothes off and cleaning, they do make every effort to keep them warm, but in the field, of course, we are assuming that we would have a smooth flow that carried the patient right through, so it would be only a matter of a very few minutes. Actually it would be much less time than we are taking because we were going slow here to keep with the description. Actually they run them through as rapidly as possible. If they had a man in shock, whether they would give him plasma or not, I don't know, but they do give drugs and things like that.

DR. ABT: One other thing I would like to mention - - this is entirely my own idea - - this is a small first aid kit that could go along with the stretcher bearer, or the ambulance, or whoever is picking these people up. I don't know if you noticed

it on the stretchers as the corpsmen brought the patient in the first time. This is where your initial first aid may save quite a space of time. The eye splashes, or evident skin splashes, could be much more readily attended to right as the patient was picked up on the stretcher.

QUESTION: Wouldn't it be a better procedure to have the stretcher bearers in the undressing room take the patient into the air lock rather than to have the stretcher bearers come into the contaminated area?

DR. ABT: Well, you mean the stretcher bearers who are here?

QUESTION: Take the patient to the air lock and then the others don't have to come in the undressing room.

DR. ABT: Well, it could be done.

ENSIGN NORTH: In that connection, sir, it is assumed that the outside stretcher bearers are likely to have become contaminated sufficiently so they might in lifting him get against the blanket and contaminate it and then the next patient might have the blanket touch him and thus become contaminated just after being swabbed off to some extent. The permanent personnel here are less likely to become contaminated in the chamber than the stretcher bearers in the field who have to pick up the patient wherever he may lie and take debris off of him and everything else.

DR. ABT: I think the whole is the matter of the lesser evil, as far as I can see it.

QUESTION: How do you decontaminate your stretcher? What do you do with it?

DR. ABT: Well, we take it out and we have this slurry solution which is 50 percent chloride and 50 percent water, and we give it a good going over with brooms, brushes, and so forth, and you can leave the slurry on for 24 hours. We used to have paper on this as it comes in and then we might have that taken off, and take them back to the ambulance and onto the field, but your stretcher bearers were to take the paper but if they would have another stretcher when they came in with the victim they would waste as little time as possible.

QUESTION: How many stretchers would you use up in this place in 24 hours, if it takes 24 hours to decontaminate it?

DR. ABT: Well, you can make stretchers with a blanket and a pair of brooms. I don't worry much about that.

QUESTION: I would think they could be steamed quite fast.

DR. ABT: We could get rid of it by steam. If you just had a pair of poles and a blanket, I think you could get plenty of blankets, and so on, to make as many stretchers as you wanted. Does anyone want us to do the scene over again, or to do the scene another way and see how it works?

QUESTION: I would like to ask you, since perhaps it is done more rapidly if you use improvised stretchers with blankets, how would you decontaminate the blankets?

DR. ABT: That is a good question. You put them in one of these other G.I. cans and build a fire under it and put your blankets in and hang your clothing from the top. That is the way they are taught by the army chemical warfare service; all those who decontaminate in the field take a G.I. can and hang the clothes, and you put water in the false bottom and let it simmer for three or four hours and that will hydrolize it, and there you are.

QUESTION: When you move the patient through the air lock, couldn't you have some kind of a blanket, or cover or something, and couldn't you have a G.I. can in the cleansing room to deposit that cover in?

DR. ABT: Why would you cover him up? You have just gone to all the trouble of getting his clothes off. Why should you cover him up again?

QUESTION: You are contributing to any danger of shock if you leave him exposed. Couldn't you cover him with a clean sheet, or a blanket, so possibly if he has to wait five minutes to get in the air lock - -

DR. ABT: If he had to wait that long, decidedly so, but, on the other hand, if things were running smoothly enough so the clothing came off and he immediately went through the air lock, I think it would be a waste of blankets.

[illegible]: [illegible]

[illegible]: [illegible]

[illegible]: [illegible]

[illegible]: [illegible]

[illegible]: I would like to ask you, since nothing is [illegible] more regrettable if you are inconvenienced [illegible] [illegible], how would you [illegible] the [illegible]

[illegible]: That is a good question. You put them in one of those other O.K. cans and build a fire under it and put your blankets in and leave your clothing from the top. That is the way they are taught by the army chemical warfare service. All those who [illegible] in the Italian campaign [illegible] and they [illegible] and you just [illegible] in the Italian [illegible] and it takes [illegible] or four hours and then [illegible] [illegible] it, and there you are.

[illegible]: [illegible]

[illegible]: [illegible]

[illegible]: [illegible]

[illegible]: [illegible]

QUESTION: The room temperature is how warm?

DR. ABT: Well, Major Cary has got us in a nice warm air-conditioned building here. We don't have to worry about anything. There are exhaust fans and he has a thermostat control. Well, if there are no other questions, thank you very much for your attention.

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